



# Energy and Water Management Plan

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## Section 1: Instructions

[Texas Government Code §447.009](#) requires each state agency and institution of higher education to set and report percentage goals for reducing its usage of water, electricity, transportation fuel and natural gas. According to [34 Tex. Admin. Code §19.14 \(2016\)](#), these goals must be included in a comprehensive energy and water management plan (EWMP) submitted by **Oct. 31** of every fiscal year to the State Energy Conservation Office (SECO). This requirement is intended to streamline and standardize the energy reporting requirements of state agencies and institutions of higher education.

Please complete Section 2: Agency Information and Section 3: Providing Agency or Section 4: Tenant Agency, as applicable, for **the previous fiscal year**. Save this form as “EWMP-Agency Number-Agency Acronym-FY20##.docx” (e.g., EWMP-104-LBB-FY2021.docx), and return this form by email to [seco.reporting@cpa.texas.gov](mailto:seco.reporting@cpa.texas.gov) no later than **Oct. 31**.

Please do not embed images, charts or graphics in your responses; however, you may provide hyperlinks to them.

Please visit [SECO’s Energy and Reporting website](#) for more information. For questions about reporting, please contact [seco.reporting@cpa.texas.gov](mailto:seco.reporting@cpa.texas.gov) or call 844-519-5676.

## Section 2: Agency Information

*Please provide the name and number (if applicable) of the agency that is submitting an Energy and Water Management Plan.*

Agency Name: Texas Board of Professional Engineers and Land Surveyors

Agency Number: 460

Other agencies included in this summary: none

*Please provide the contact information for the person(s) responsible for implementation of the recommendations in the plan and the contact information for the person(s) responsible for reporting and submitting the plan, if different.*

### Implementation Contact

Name: Jeff Mutscher

Title: CFO

Email: jeff.mutscher@pels.texas.gov

Phone: 512-440-3063

### Reporting/Submission Contact

Name: Jeff Mutscher

Title: CFO

Email: jeff.mutscher@pels.texas.gov

Phone: 512-440-3063

## Section 3: Providing Agency

Does your agency occupy or manage a state-owned building and pay the utilities? Yes - Providing Agency

If NO, please skip to [Section 4: Tenant Agency](#).

If YES, please complete the following:

Have you submitted, or will you be submitting by Oct. 31, 2021, energy and water usage data for your agency and properties using the [ENERGY STAR Portfolio Manager](#) tool? Yes - EnergyStar data submitted

### Progress Report

*The Progress Report Section must outline the progress of activities related to the implementation of projects from the previous Energy and Water Management Plan (if applicable), including continuation of or new preliminary energy audits, a summary of the results, utility efficiency and cost savings. Agencies should periodically conduct preliminary energy audits to identify new utility savings opportunities.*

- 1. The agency installed a dedicated air conditioning system for the computer room.*
- 2. The agency had several additional thermostats installed in offices that previously shared the thermostat with the computer room.*
- 3. The agency has replaced single pane windows with double pane windows on approximately 70% of the building.*
- 4. The agency has re-sealed all windows in building.*
- 5. The agency replaced all CRT computer monitors with flat panel monitors.*
- 6. The soda machine was removed which reduces electrical consumption.*
- 7. The refrigerator in the lunch room was replaced with an energy saving model.*
- 8. New water saving toilets were installed in all agency bathrooms.*
- 9. All fluorescent lights and ballasts were replaced with high efficiency F-32 T-8 system. This project replaced 0.75 amp ballast with a 0.28 amp unit.*
- 10. The air system ductwork was cleaned.*
- 11. The twenty five year old main electrical panel was replaced with an updated panel.*
- 12. The landscape watering schedule was revised to reduce watering frequency and duration during high demand months.*
- 13. The monthly thermostat monitoring schedule was revised.*
- 14. Regularly scheduled maintenance is performed on air conditioning and heating units.*
- 15. Texas Energy Engineering Services (TEES) performed an energy audit and evaluated the building for thermal loss issues and the potential for solar power installation.*
- 16. The agency began participation in the Council on Competitive Government Statewide Management Services Project in cooperation with the State Energy Conservation Office (SECO). This includes utility tracking and recommendations for improvements by LPB Energy Consulting.*
- 17. The agency worked with City of Austin to replace main electric meter that was reporting erroneous readings.*
- 18. The agency replaced original flex duct from main trunk ducts to registers throughout the building and replaced all rooftop HVAC units with new, more efficient units at the end of first quarter 2012.*
- 19. The agency has been following the City of Austin watering schedule for businesses*

- due to continuing drought conditions.*
- 20. For years 2012 - 2022, the agency achieved its goal of keeping total energy usage at least 5% less than the 2008 baseline.*
  - 21. As part of the agency's strategic plan implementation, a workgroup evaluated multiple components of the facility and made recommendations for future improvements. A tracking system for repairs and improvements was also created.*
  - 22. During FY 2015 & 2018, repairs were made to the irrigation system to help conserve water.*
  - 23. The single 40 gallon water heater used by the facility was replaced in 2016 with a new, more efficient unit.*
  - 24. Roof condition assessment completed by engineering firm in preparation for roof replacement.*
  - 25. During FY 2017, additional single pane windows were replaced with double pane insulated windows along the south wall of the building.*
  - 26. The entire roof of the building was replaced with a more insulated and durable material during the fourth quarter of 2017.*
  - 27. Additional exterior and interior spot lights and can lights were replaced with efficient LED lighting.*

## **Goals**

The Goals Section must summarize the future goals for utility conservation. In accordance with [Texas Government Code §447.009](#), each state agency and institution of higher education shall set percentage goals for reducing the agency's or institution's usage of water, electricity, transportation fuels and natural gas. The percentage goal should state a target year and reference the target goal relative to a benchmark year.

### Goal One

*Determine and implement all cost-effective energy and resource conservation measures that are compatible with the needs of the staff in the performance of their duties.*

*Previously, the agency set a goal to reduce energy and resource use by 10% over the FY 04-09 period. In FY 2010, executive management reviewed the agency resource usage history and set a new goal of a 5% reduction from a FY 2008 baseline during the FY 2010-2012 period. By the end of FY 2012, the agency had achieved its goal of keeping total energy usage 5% below the baseline and the agency goal for FY 2022 – 2023 will be to maintain at least a 5% reduction from the 2008 baseline.*

*Looking ahead to FY 2024 – 2025, the agency goal will be to maintain a 20% reduction in energy from the 2008 baseline. Based on the 2022 energy audit, the agency has about reached its most feasible energy conservation point.*

*Fiscal Year 2019 total energy consumption was only 43% of the baseline of 2008. The Fiscal Year 2020 total energy consumption exceeded the FY 2019 usage, but it is still less than half the 2008 amount.*

*During FY 2021, overall energy consumption was significantly less than FY 2020, and 42% of total consumption in 2008.*

*Fiscal Year 2022 total energy was only 49% of the baseline 2008 energy consumption.*

*Overall energy consumption did exceed the FY 2021 amount by about 18%.*

**Goal Two**

*Develop and implement effective utility conservation staff awareness.*

*In order to achieve savings, and to recognize additional opportunities for energy conservation, each staff person must be made aware and informed of how they can help and understand the advantage of their individual participation.*

**Goal Three**

*Develop and implement a utility consumption and cost tracking system.*

Utility	Target Year	Benchmark Year	Percentage Goal
Water	2024	2008	20%
Electricity	2024	FY 2020*	20%
Transportation fuels	N/A	N/A	N/A
Natural gas	2024	2008	20%

\*[Texas Health and Safety Code Section 388.005\(c\) and \(f\)](#). Entities that began energy conservation tracking prior to Sept. 1, 2007, or in attainment areas, may substitute their own electricity benchmark years.

**Strategy for Achieving Goals**

*The Strategy Section must describe how the agency or institution plans to prioritize and implement cost-effective utility efficiency measures in order to meet the established utility conservation goals.*

*In order to decrease energy and resource consumption by 5% the following energy saving and resource reduction measures will be implemented:*

- *Track the energy usage after installation of new fluorescent lights and ballasts (high efficiency F-32 T-8 system). We anticipate an annual reduction in lighting power consumption of 15% to 20%.*
- *Track energy savings after replacement of 70% of agency windows with double-pane windows and installation of window film in several offices. In addition, all windows were re-sealed in FY 2008.*
- *At the end of the workday, turn off all computers or have all computers go into system standby.*
- *Track the energy usage after replacement of CRT screens with flat screen monitors for all workstations in agency. We anticipate a 30% reduction in monitor power consumption.*
- *Track water usage after revising landscape watering schedule to comply with City of Austin restriction and monitoring rain amounts. We anticipate a 20% reduction in water consumption.*
- *Agency arranged an energy audit through the State Energy Conservation Office (SECO) with Texas Energy Engineering Services. Meetings, initial inspection, and report was completed in FY 2008.*
- *Agency requested quotes for a long-term plan to complete replacement of agency windows with double-pane windows.*
- *Agency replaced original flex duct from main trunk ducts to registers throughout the*

*building and replaced all rooftop HVAC units with new, more efficient units at the end of first quarter 2012.*

- Use the new HVAC system to maintain a constant temperature throughout the building and program the system to run less during unoccupied hours.*
- Agency replaced the roof of the entire building with a new insulated roofing system in December 2017.*
- Agency arranged two energy audits through the State Energy Conservation Office (SECO) with Texas Energy Engineering Services. Meetings, initial inspection, and report was completed in FY 2022.*

### **Implementation Schedule**

*The Implementation Schedule Section must outline a proposed timeline for implementing utility cost-reduction measures and a strategy for monitoring utility savings of the installed utility measures.*

#### Implementation Schedule

*The following actions and schedule will be used:*

*Continue to monitor operations that affect energy and resource use and make recommended changes as needed.*

*Continue to determine equipment needs that will improve energy efficiency and resource utilization and recommend an implementation schedule based upon financial resources as needed.*

#### Monitoring Strategy

*The monthly costs and use of electricity, gas, and water will be checked quarterly and compared to the base year of FY08 to determine if progress is being made to meet planned efficiencies. It must be noted that while usage rates may drop due to efficiencies and improvements, overall costs may increase due to rising energy costs. Costs and usage rates are tracked by the agency. A team of agency staff evaluated all components of the facility to create a tracking system of all repairs and to recommend future improvements to the facility.*

### **Finance Strategy**

*The Finance Strategy Section must describe how the agency or institution plans to obtain funding for the recommended utility cost-reduction measures. This section should show the estimated cost of all projects and the funding sources to be used.*

*The primary financing for the identification and implementation of energy conservation measures will be through inclusion in the yearly budget. Since the agency is part of the SDSI project, the agency is tasked with operating like a business. All reductions in energy and resource consumption will positively affect the operations and budget of the agency. Energy consumption will continue to be tracked monthly.*

**Transportation Fuel Consumption**

Does your agency maintain one or more state-owned vehicles? No - Does not have fleet

Does your agency report its fuel usage via the [Texas Fleet System](#)? NA - No vehicles

**Employee Awareness Plan**

*The Employee Awareness Plan Section must outline how the agency will make employees aware of utility cost-reduction measures, both directly (affecting change in behavior) and indirectly (not designed to affect behavior).*

*The agency will include both direct and indirect awareness in the development of its UAP. We support the efforts of State Energy Conservation Office (SECO) regarding energy efficiency awareness.*

*The intent of direct awareness activities is to bring about an appropriate culture change whereby informed staff not only act in prescribed ways to conserve energy, but also become encouraged and facilitated to be proactive in their own ongoing discovery of new energy and resource conservation opportunities. Various means to foster and reward this incentive will be explored, including appropriate forms of recognition.*

*In addition to utility awareness, the agency also has implemented a recycling program. During FY 2009 the agency began utilizing single-stream recycling, encouraging staff to recycle all metals, plastic, or glass. In addition, the agency recycles all used paper products.*

## Section 4: Tenant Agency

**Progress Report**

*The Progress Report Section must outline the progress of the implementation of projects from the previous Energy and Water Management Plan or Resource Efficiency Plan (if applicable), including a summary of the results of the projects in terms of utility efficiency and cost savings.*

Click to enter your agency's Progress Report.

**Transportation Fuel Consumption (if applicable)**

Does your agency maintain one or more state-owned vehicles? No - Does not have flee

Does your agency report its fuel usage via the [Texas Fleet System](#)? NA - No vehicles

**Employee Awareness Plan**

*The Employee Awareness Plan Section must outline how the agency will make employees aware of direct utility consumption. Plans might include employee training, signage or recognition programs.*

Click to enter your agency's Employee Awareness Plan.